

**Flood Control Project Maintenance
Levee Inspections**

Fall 2014 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

ST0020	Overall LMA Rating	Total LMA Miles						
Sutter Maintenance Yard East-West Interceptor	U	4.79						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation	2.88		2.88	60.11%	0.02			
Encroachments	0.25		0.25	5.22%	0.12	0.03		
Erosion / Bank Caving	0.43	0.03	0.55	11.48%				
<i>Rivers, Channels & Designated Floodways</i>								
Erosion / Bank Caving		0.01	0.04	0.83%				
<i>LMA Totals:</i>	3.56	0.04	3.72	77.65%	0.14	0.03	0.00	0.00
Unit No. 01 West Levee RB	Overall Unit Rating	Total Unit Miles						
ST0020	U	1.75						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation	0.45		0.45	25.78%	0.02			
Encroachments					0.02			
Erosion / Bank Caving		0.03	0.12	6.87%				
<i>Rivers, Channels & Designated Floodways</i>								
Erosion / Bank Caving		0.01	0.04	2.29%				
<i>Unit Totals:</i>	0.45	0.04	0.61	34.94%	0.04	0.00	0.00	0.00
Unit No. 02 East Levee LB	Overall Unit Rating	Total Unit Miles						
ST0020	U	3.05						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Vegetation	2.43		2.43	79.80%				
Encroachments	0.25		0.25	8.21%	0.10	0.03		
Erosion / Bank Caving	0.43		0.43	14.12%				
<i>Unit Totals:</i>	3.11	0.00	3.11	102.13%	0.10	0.03	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2014 Levee Inspection Results

Sutter Maintenance Yard East-West Interceptor

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			U	

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

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SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2014 Levee Inspection Results

Sutter Maintenance Yard East-West Interceptor

Waterway			Bank	Unit Miles
Unit No. 01 West Levee			Right	1.75
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			U	
Date of Inspection	03/20/2014 - 03/20/2014		11/25/2014 - 11/25/2014	
DWR Inspector	Bob Duffey		Bob Duffey	
Accompanied By	Steve Beckley Sutter Maintenance Yard		Steve Beckley Sutter Maintenance Yard	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- completion of the inspection
- any changes other than the results of normal maintenance
- corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 West Levee	Right	1.75	11/25/2014 11/25/2014	Bob Duffey

LM Start		Rating **	A	Issue No.	9
LM End		Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals			°	
				°	
DWR ID	DWR_NA0020_01_s_2013_9				
Action/Comments					
Inspector Comments: The LMA has the O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	10
LM End		Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment			°	
				°	
DWR ID	DWR_NA0020_01_s_2013_10				
Action/Comments					
Inspector Comments: The LMA has adequate flood fight supplies and equipment.					

No Photos

LM Start		Rating **	A	Issue No.	11
LM End		Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training			°	
				°	
DWR ID	DWR_NA0020_01_s_2013_11				
Action/Comments					
Inspector Comments: The LMA completed flood fight training in 2014.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 West Levee	Right	1.75	11/25/2014 11/25/2014	Bob Duffey

LM Start	0.00	Rating **	M	Issue No.	5
LM End	0.13	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.171577 °	39.171543 °
				-121.760019 °	-121.758291 °
DWR ID	DWR_NA0020_01_s_2012_5				
Action/Comments					
Remove the wild growth other than native grasses from the levee slopes.					

No Photos

LM Start	0.00	Rating **	M	Issue No.	7
LM End	0.32	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.171577 °	39.171481 °
				-121.760019 °	-121.754826 °
DWR ID	DWR_NA0020_01_s_2012_7				
Action/Comments					
Remove the wild growth other than native grasses from the levee slopes.					

Photo 1 of 1 : FA_2014_ST0020_213_7_20141013_00005.jpg



View of the vegetation along the w/s toe.

LM Start	0.23	Rating **	M	Issue No.	2
LM End	0.25	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.171418 °	39.171408 °
				-121.755963 °	-121.755578 °
DWR ID	DWR_NA0020_01_s_2012_2				
Action/Comments					
Landscaping					

Photo 1 of 1 : FA_2014_ST0020_213_2_20141201_00012.jpg



View of the cactus and pine trees along the waterside berm.

*** Location**

LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 West Levee	Right	1.75	11/25/2014 11/25/2014	Bob Duffey

LM Start	0.30	Rating **	M	Issue No.	22
LM End	0.30	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.171459 °	39.171459 °
				-121.755104 °	-121.755104 °
DWR ID	DWR_NA0020_01_f_2013_22				
Action/Comments					
Tree or limb					

No Photos

LM Start	0.36	Rating **	M	Issue No.	23
LM End	0.36	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.171450 °	39.171450 °
				-121.754058 °	-121.754058 °
DWR ID	DWR_NA0020_01_f_2013_23				
Action/Comments					
Prunings					

Photo 1 of 1 : FA_2014_ST0020_213_23_20141013_00010.jpg



View of the tree limbs and debris on the w/s berm.

LM Start	0.62	Rating **	U	Issue No.	4
LM End	0.65	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171292 °	39.171232 °
				-121.748868 °	-121.748175 °
DWR ID	DWR_NA0020_01_s_2012_4				
Action/Comments					
Schedule repair of erosion site prior to the next inspection.					

Photo 1 of 1 : FA_2014_ST0020_213_4_20141201_00013.jpg



View of the erosion along the concrete ditch on the waterside slope.

*** Location**

LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 West Levee	Right	1.75	11/25/2014 11/25/2014	Bob Duffey

LM Start	0.63	Rating **	A	Issue No.	102
LM End	0.63	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171329 °	39.171329 °
				-121.748235 °	-121.748235 °
DWR ID	DWR_ST0020_01_s _ 2014_102				
Action/Comments					
Note and monitor erosion site.					

Photo 1 of 1 : FA_2014_ST0020_213_102_20141013_00011.jpg



View of the repaired erosion along the w/s ditch.

LM Start	0.88	Rating **	C	Issue No.	8
LM End	0.88	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171335 °	39.171335 °
				-121.744039 °	-121.744039 °
DWR ID	DWR_NA0020_01_s _ 2012_8				
Action/Comments					
Note and monitor erosion site.					

No Photos

LM Start	0.92	Rating **	C	Issue No.	12
LM End	1.01	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171329 °	39.171310 °
				-121.742385 °	-121.741178 °
DWR ID	DWR_NA0020_01_f _ 2012_12				
Action/Comments					
Note and monitor erosion site.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 West Levee	Right	1.75	11/25/2014 11/25/2014	Bob Duffey

LM Start	1.03	Rating **	C	Issue No.	14
LM End	1.07	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171314 °	39.171300 °
				-121.740994 °	-121.740173 °
DWR ID	DWR_NA0020_01_s_2013_14				
Action/Comments					
Note and monitor erosion site.					

No Photos

LM Start	1.16	Rating **	C	Issue No.	13
LM End	1.24	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171271 °	39.171252 °
				-121.738194 °	-121.736868 °
DWR ID	DWR_NA0020_01_f_2012_13				
Action/Comments					
Note and monitor erosion site.					

No Photos

LM Start	1.67	Rating **	U	Issue No.	6
LM End	1.67	Issue Type +	Ma	Location *	WS
Category	Rivers, Channels & Designated Floodways			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.171128 °	39.171128 °
				-121.729235 °	-121.729235 °
DWR ID	DWR_NA0020_01_s_2012_6				
Action/Comments					
Inspector Comments: Sutter Yard needs to repair the channel.					

Photo 1 of 1 : FA_2014_ST0020_213_6_20141201_00020.jpg



View of the erosion along the waterside slope.

*** Location**

LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**

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U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2014 Levee Inspection Results

Sutter Maintenance Yard East-West Interceptor

Waterway			Bank	Unit Miles
Unit No. 02 East Levee			Left	3.05
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			U	
Date of Inspection	03/24/2014 - 03/24/2014		11/25/2014 - 11/25/2014	
DWR Inspector	Bob Duffey		Bob Duffey	
Accompanied By	Steve Beckley Sutter Maintenance Yard		Steve Beckley Sutter Maintenance Yard	

Summer & Winter Inspections

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 East Levee	Left	3.05	11/25/2014 11/25/2014	Bob Duffey

LM Start	0.00	Rating **	M	Issue No.	11
LM End	0.26	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.171116 °	39.171101 °
				-121.726501 °	-121.721857 °
DWR ID	DWR_NA0020_02_s_2012_11				
Action/Comments					
Remove the wild growth other than native grasses from the levee slopes.					

No Photos

LM Start	0.25	Rating **	M	Issue No.	12
LM End	0.25	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.171107 °	39.171107 °
				-121.722069 °	-121.722069 °
DWR ID	DWR_NA0020_02_s_2012_12				
Action/Comments					
Garbage Inspector Comments: Tires					

Photo 1 of 1 : FA_2014_ST0020_214_12_20141013_00008.jpg



View of the tires along the W/S toe.

LM Start	0.26	Rating **	M	Issue No.	9
LM End	0.26	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.171101 °	39.171101 °
				-121.721856 °	-121.721856 °
DWR ID	DWR_NA0020_02_s_2012_9				
Action/Comments					
Debris					

Photo 1 of 1 : FA_2014_ST0020_214_9_20141013_00006.jpg



View of the debris along the L/S toe.

*** Location**

LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**

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U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

Levee Inspection Report By Mile - Fall 2014

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 East Levee	Left	3.05	11/25/2014 11/25/2014	Bob Duffey

Photo 1 of 1 : FA_2014_ST0020_214_2_20141201_00014.jpg



View of the vegetation on both slopes.

Photo 1 of 1 : FA_2014_ST0020_214_3_20141013_00002.jpg



View of the piles of broken concrete next to the levee.

Photo 1 of 1 : FA_2014_ST0020_214_4_20141013_00003.jpg



View of the erosion along the waterside slope.

* Location	** Rating	+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2014

Sutter Maintenance Yard East-West Interceptor

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 East Levee	Left	3.05	11/25/2014 11/25/2014	Bob Duffey

LM Start	1.82	Rating **	M	Issue No.	25
LM End	1.89	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.170801 °	39.170794 °
				-121.692591 °	-121.691355 °
DWR ID	DWR_ST0020_02_s_ 2014_25				
Action/Comments					
Prunings					

Photo 1 of 1 : FA_2014_ST0020_214_25_20141013_00011.jpg



View of the tree prunings along the landside slope.

LM Start	1.92	Rating **	M	Issue No.	5
LM End	2.04	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.171104 °	39.171104 °
				-121.718880 °	-121.718876 °
DWR ID	DWR_NA0020_02_s_2012_5				
Action/Comments					
Equipment					

Photo 1 of 1 : FA_2014_ST0020_214_5_20141013_00004.jpg



View of the equipment and buildings next to the landside berm.

LM Start	1.93	Rating **	U	Issue No.	26
LM End	1.93	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.170743 °	39.170743 °
				-121.690644 °	-121.690644 °
DWR ID	DWR_ST0020_02_s_ 2014_26				
Action/Comments					
Pipe					

Photo 1 of 1 : FA_2014_ST0020_214_26_20141013_00012.jpg



View of the unauthorized pipe going through the crown of the levee.

*** Location**
LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**
A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type
Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

Levee Inspection Report By Mile - Fall 2014

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 East Levee	Left	3.05	11/25/2014 11/25/2014	Bob Duffey

Photo 1 of 1 : FA_2014_ST0020_214_6_20141013_00005.jpg



View of the erosion along the W/S slope.

Photo 1 of 1 : FA_2014_ST0020_214_27_20141013_00013.jpg



View of the unauthorized pipe going through the crown of the levee.

Photo 1 of 1 : FA_2014_ST0020_214_17_20141013_00009.jpg



View of the erosion caused by the unauthorized pipe.

* Location	** Rating	+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

